

### SECTION III.—FORECASTS.

#### STORMS AND WARNINGS FOR MAY.

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At the beginning of the month a high-pressure area of great magnitude covered the great central valleys and the lake region and dominated weather conditions over the entire country east of the Rocky Mountains, while a low-pressure area of pronounced character was over the Grand Banks and pressure was below normal over Saskatchewan and extreme western Texas. The high-pressure area passed slowly southeastward to West Virginia by the morning of the 3d, and at the end of the next 24 hours was off the Middle Atlantic coast. Frosts occurred on the morning of the 1st over the lower lake region, the Ohio Valley, and portions of the Middle Atlantic and New England States, and on the morning of the 2d over the lower lake region, lower Michigan, and the North Atlantic States, warnings of which were disseminated previously to the occurrence of the frosts.

The pressure-change map on the morning of the 2d showed a general fall throughout the Rocky Mountain region, and on the morning of the 3d a low center was over the Plains States. This area of falling pressure drifted eastward until on the morning of the 4th a storm of marked intensity was over extreme western Pennsylvania, whence it passed eastward to the southern New England coast by the morning of the 6th and to the mouth of the St. Lawrence by the following morning. General rains attended this disturbance from the Rocky Mountains eastward.

A disturbance that first appeared over Manitoba on the morning of the 5th passed slowly southeastward to Wisconsin by the morning of the 7th, with decreasing intensity. It thence moved southeastward to Ohio by the evening of the 7th, and recurving northeastward developed a secondary over Virginia on the morning of the 8th. The main center passed northeastward with decreasing intensity, while the Virginia center moved north-northeastward to northern New England with marked development by the morning of the 9th, and during the next 48 hours to Nova Scotia. Showers and thunderstorms were more or less general from the Mississippi Valley eastward.

A high-pressure area appeared on the North Pacific coast on the morning of the 4th, and on the following morning an offshoot from it was central over western Montana. On the evening of the latter date another high area was central over Alberta. The North Pacific high moved rapidly eastward with diminishing intensity and on the morning of the 7th was over West Virginia. The Alberta high passed slowly southeastward to the West Gulf and thence across the Gulf States to the Atlantic coast. On the morning of the 7th, frosts occurred in portions of Montana, Wyoming, and Nebraska, and on the 8th more or less generally over the Plains States, warnings being successfully issued in both cases.

Pressure became low over the North Pacific coast on the morning of the 7th, and on the following day pressure was low over the Plateau region and a low center had appeared

over Alberta. On the 9th pressure was low from the northern Plains States southwestward to Utah. The northern center of this depression moved rapidly eastward with decreasing intensity, while a secondary was developing over the Rocky Mountain region. On the evening of the 10th the secondary was over Colorado, and by the following morning had moved to northeastern Kansas. It thence moved east-northeastward to the Middle Atlantic coast by the morning of the 13th, precipitation occurring quite generally over a belt immediately north of its path from the northern Rocky Mountain region eastward. On the 11th storm warnings were ordered for the Great Lakes and high winds occurred as indicated in the warnings. In connection with this same storm, storm warnings were ordered for the Atlantic coast from Delaware Breakwater to Eastport and winds of gale force occurred.

On the morning of the 10th a high-pressure area appeared over Saskatchewan, attended by temperatures near or below freezing, and on the following morning a center was over southern Saskatchewan. It passed slowly southward and then eastward to South Dakota by the morning of the 13th, on the evening of which date it was reinforced by another high area, the center of which appeared over Alberta. It passed thence slowly east-southeastward to western Pennsylvania by the 18th. On the 15th frosts occurred over the upper Mississippi Valley and Michigan and on the following morning in Michigan, the upper Ohio Valley and the Lower Lake region, warnings of which were in both cases previously disseminated. From western Pennsylvania the high settled slowly southward over the east Gulf States, where it maintained its identity until the 22d. On the morning of the 18th storm warnings were issued for the south Atlantic coast and high winds were reported over that region.

During the passage of this high eastward, conditions were unsettled over the Rocky Mountain region and showers occurred over the southern Rocky Mountain region, the southern plateau, and the west Gulf States.

A low center was over Alberta on the morning of the 17th and by the morning of the 24th it was over the Canadian Maritime Provinces, having passed at first slowly southeastward and later eastward over a northern route. Scattered showers and thunderstorms attended its passage over northern States from the Rocky Mountain region eastward to the Atlantic coast.

It was followed by a high area that first appeared over British Columbia on the morning of the 20th and which passed east-southeastward to the Middle Atlantic coast by the morning of the 24th.

This high was in turn followed by a low-pressure area that made its appearance over British Columbia on the evening of the 23d and followed a course along the northern boundary similar to the preceding low and attended by a more or less similar distribution of precipitation. Storm warnings were ordered for the Great Lakes except Superior on the 25th and high winds occurred as indicated.

This low was followed by another one of slight intensity that passed over practically the same course as the one referred to immediately above.

On the morning of the 26th the Pacific Ocean high had encroached on the north Pacific coast and there were indications of the formation of a secondary high center over the northern plateau region. This actually occurred, there being a separate center on the morning of the 27th over the northern Plains States, which later passed to Maine by the 29th and was off the coast by the following morning.

On the morning of the 27th a low appeared over Alberta and passing thence eastward was central over the Canadian Maritime Provinces on the last day of the month. This low caused some high winds in the region of the Upper Lakes.

It was followed by another north Pacific high that made its appearance on the evening of the 28th over northern Wyoming. On the last day of the month it was over Ohio.

At the end of the month a low-pressure area was over Quebec and pressure was low over the Rocky Mountain region and the Pacific coast, while pressure was relatively high over the Plains States and off the south Atlantic coast.

#### NORTHERN HEMISPHERE PRESSURE.

*Alaska.*—Pressure averaged above normal at all stations for the month. During the first two decades pres-

sure was generally above the seasonal average while during the last decade it was generally below, except over the Aleutian Islands. Lows occurred about the 1st, 8th, 16th, 24th, 25th-26th, and 27th-28th; and highs about the 5th-6th, 12th, and 20th.

*Honolulu.*—Pressure averaged decidedly below normal, being continuously normal or below except on the first day of the month. Lows occurred on the 2d-3d, 10th, 16th, 18th, 20th-21st, 23d, 25th-26th, and 29th. There was no high of consequence during the month.

*Iceland.*—The pressure averaged slightly below normal for the month with rapid alternations of rising and falling pressure. Lows occurred on the 2d, 4th-5th, 6th-7th, 10th, 12th-13th, 15th-16th, 17th-18th, 21st-22d, and 29th; and highs on the 3d-4th, 8th-9th, 11th, 14th, 23d, and 26th.

*Azores.*—Pressure averaged decidedly above normal, being almost continuously above after the 3d. The lowest pressure of the month occurred on the 1st, and there was no low of consequence thereafter. Highs occurred on the 8th-11th, 19th, 24th, 28th, and last day of the month.

*Siberia.*—Pressure over this region averaged slightly above normal. Lows occurred about the 5th, 7th, 9th, 13th-14th, 15th, 23d, and 27th-28th; and highs about the 2d-3d, 11th-12th, 17th-18th, 20th, 26th, and 28th-29th.